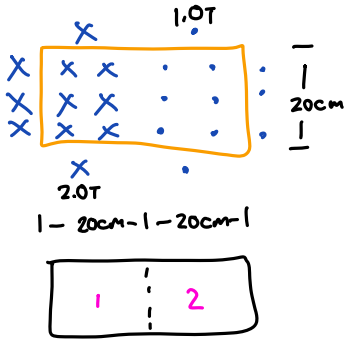
Taylor Larrechea CQ: 3
Dr. Middleton PHYS 132 HW P: 4,6,27
4-4-17 Ch. 33

Problems

33.P.4



Flux $\equiv \Phi = AB\cos\theta$

$\Phi = \Phi_1 + \Phi_2$

$\Phi = 0.04$

$\Phi_1 = A_1 B_1 \cos\theta_1$ $\quad \Phi_1 = (0.04m^2)(2.0T)\cos(0)$ $\quad \Phi_1 = 0.08\,Wb$

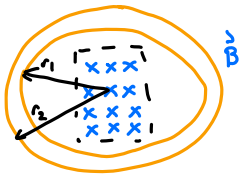
$A_1 = 0.2m \times 0.2m$
$B_1 = 2.0T$
$\theta = 0°$

$\Phi_2 = A_2 B_2 \cos\theta_2$ $\quad \Phi_2 = (0.04m^2)(1.0T)\cos(180)$ $\quad \Phi_2 = -0.04\,wb$

$A_2 = 0.2m \times 0.2m$
$B_2 = 1.0T$
$\theta_2 = 180°$

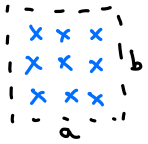
$\Phi = \Phi_1 + \Phi_2 = 0.08wb - 0.04wb = 0.04wb$

33.P.6



$\Phi = AB\cos\theta$

$\Phi = Bab$ wb



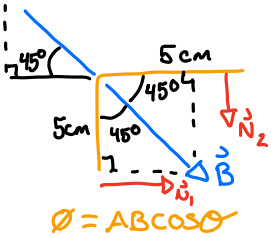
$\Phi = AB\cos\theta = (ab)B\cos(0) = Bab$

$A = ab$

$B = B$

$\theta = 0$

33.P.27



$\Phi = ABCOS\theta$

0.050T = B

0.05m · 0.1m = A

45° = θ

3.54×10^{-4} wb

$\Phi = \Phi_1 + \Phi_2 = 2\Phi_1 = 3.54 \times 10^{-4}$ wb

$\Phi_1 = A_1 B\cos\theta = (0.008m^2)(0.050T)\cos 45$

$A_1 = 0.008m^2$

$B = 0.050T$

$\theta = 45^\circ$

$= 1.77 \times 10^{-4}$ wb

$\Phi_1 = 1.77 \times 10^{-4}$ wb

$\Phi_2 = \Phi_1$ due to symmetry

33.CQ.3

There would be a resistive force up due to the flux decreasing. Thus requiring a counteracting force up.